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EXAMINER

KIM, JOHN K

ART UNIT

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4125

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/070,063	Applicant(s) SPOHR ET AL.	
	Examiner JOHN K. KIM	Art Unit 4125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities: The claim recites “.... the drive unit is designed to be rectilinear, curve-like, loop-like, arcuate and circular “, but the examiner believes ‘and’ should be corrected to ‘or’.
 2. Claim 12 is objected to because of the following informalities: The claim recites “.... the drive unit (2.2), especially the linear element (14), is assigned to the primary coil (9) as a linear primary coil (9).” The examiner believes correct sentence is “.... the drive unit (2.2), especially the linear element (14), is assigned to the primary coil (9).”
 3. Claim 16 is objected to because of the following informalities: The claim recites “.... the drive unit and the primary coil are designed to be arcuate, linear, loop-like, circular “, but the examiner believes ‘.... arcuate, linear, loop-like, circular’ should be corrected to ‘.... arcuate, linear, loop-like or circular’.
- Appropriate corrections are required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6-9, 13, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Graf (US 6200426).

As for claim 1, Graf teaches (in Figs. 1 and 5) a device for moving an active load or any desired object, especially rotationally or linearly, on a carrier (14), especially an output drive flange (24) or platform, with a drive unit (26) for moving the active load, characterized in that power and/or signals can be transmitted without contact to or from the load, via at least one transmission device (12).

As for claim 2, Graf teaches the claimed invention as applied to claim 1 above. Graf further teaches (in Figs. 1 and 5) the transmission device (12) comprises a primary coil (84) which is fixed with respect to a housing (20) and a secondary coil (68) which is fixed with respect to the carrier (14).

As for claim 3, Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) the transmission of power and/or signals between the primary coil (84) and secondary coil (68) within the transmission device (12) is carried out without contact and bidirectionally.

As for claim 4, Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) power and/or signals can be transmitted bidirectionally from the primary coil (84) from or to an external control system (50).

As for claim 6, Graf teaches the claimed invention as applied to claim 1 above. Graf further teaches (in Figs. 1 and 5) a transmission (12) is provided between the drive unit (26) and the carrier (14), especially the output drive flange (24).

As for claim 7, Graf teaches the claimed invention as applied to claim 6 above. Graf further teaches (in Figs. 1 and 5) the transmission (12) is connected to the output drive flange (24).

As for claim 8, Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) the secondary coil (68) is firmly connected to the carrier (14), especially the output drive flange (26).

As for claim 9, Graf teaches the claimed invention as applied to claim 6 above. Graf further teaches (in Figs. 1 and 5) the output drive flange (24) on the shaft (16) can be driven about an axis (axis of 42), it being possible for the secondary coil (68) to be rotated radially about the axis with respect to the primary coil (84), and connected directly or indirectly to the output drive flange (24).

As for claim 13, Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) a secondary coil (68) is assigned to the carrier

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(14), especially the platform, and is arranged close to the linear primary coil (84) but without contact.

As for claim 14, Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) by means of linear movement of the carrier (14), especially the platform with integrated secondary coil (68), along the drive unit (26), power and/or signals can be transmitted bidirectionally and without contact to or from the primary coil (84) or an active load.

As for claim 16, Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) the drive unit and the primary coil (9) are designed to be arcuate, linear, loop-like or circular.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US 6200426) in view of Coles et al (US 5994807).

Graf teaches the claimed invention as applied to claim 2 above. Graf further teaches (in Figs. 1 and 5) the drive unit (26) is arranged as an electric motor (col 2, line 61-62), which is connected to the carrier (14), especially the output drive flange (24), via a shaft (16), but failed to teach or suggest the drive unit (26) is arranged in the housing (20). In the same field of endeavor, Coles teaches (in Fig. 5) the drive unit (20) is arranged in the housing (25). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to arrange the drive unit in the housing by combining the teaching of Coles with that of Graf for compactness.

4. Claims 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US 6200426) in view of Hirai et al (JP 08222459, Machine translated).

As for claim 10, Graf teaches the claimed invention as applied to claim 1 above. Graf, however, failed to teach or suggest the drive unit is designed as a linear element, especially a linear motor. In the same field of endeavor, Hirai teaches (in Figs. 10, 11) the drive unit (unit comprising 44, 45) is designed as a linear element, especially a

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linear motor. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to design the drive unit as a linear motor by combining the teaching of Hirai with that of Graf for linear motional application.

As for claim 11, Graf teaches the claimed invention as applied to claim 1 above. Graf, however, failed to teach or suggest the drive unit is designed to be rectilinear, curve-like, loop-like, arcuate or circular, on which the platform can be moved, especially driven in a guided manner. In the same field of endeavor, Hirai teaches (in Figs. 10, 11) the drive unit (unit comprising 44, 45) is designed to be rectilinear, on which the platform (46) can be moved, especially driven in a guided manner. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to design the drive unit to be rectilinear driven in a guided manner by combining the teaching of Hirai with that of Graf for stable linear motion.

As for claim 12, Graf and Hirai teach the claimed invention as applied to claim 10 above. The references, however, failed to teach or suggest the drive unit, especially the linear element, is assigned to the primary coil as a linear primary coil. In the same field of endeavor, Hirai teaches (in Figs. 10, 11) the drive unit (unit comprising 44, 45), especially the linear element (44), is assigned to the primary coil (53). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to assign the drive unit to primary coil by combining the teaching of Hirai with that of Graf to obtain parallel trajectory of the secondary motion.

As for claim 15, Graf teaches the claimed invention as applied to claim 2 above. Graf, however, failed to teach or suggest the drive unit (26) is designed as a linear element, especially a linear motor. In the same field of endeavor, Hirai teaches (in Figs. 10, 11) the drive unit (unit comprising 44, 45) and the primary coil (53) are arranged linearly, parallel to each other. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to arrange the drive unit and primary coil in parallel by combining the teaching of Hirai with that of Graf to obtain parallel trajectory of the secondary motion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN K. KIM whose telephone number is (571)270-5072. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 703-585-9637. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JK

/Charles D. Garber/
Supervisory Patent Examiner, Art Unit 4125